

REMARKS

Status of this application

In the Office Action mailed on March 26, 2003, the specification was objected to because the Abstract was longer than 150 words, and because the 299 page long computer program listing was submitted in printed form rather than on CD ROM disks. This response corrects both of these deficiencies: the specification has been amended to shorten the abstract and to include the appropriate reference to the Appendix on CD-ROM which is being submitted under separate cover concurrently with the filing of this response. In addition, applicants have corrected a number of other minor errors that have been noted in the specification. In making these changes, care has been taken to avoid introducing new matter.

Claims 1-10 are pending and have been rejected under 35 U.S.C. 103(a) as being directed to subject matter which the Examiner deems to be obvious in view of the combined teachings of eleven different references. The manner in which these eleven references have been combined and cited against each individual pending claims is shown in the table below:

Reference	1	2	3	4	5	6	7	8	9	10
Takahasi 6,529,918	X	X	X	X	X	X	X	X	X	X
Park 6,058,375	X	X	X	X	X	X	X	X	X	X
Ciariante et al. 6,532,488	X	X	X	X	X	X	X	X	X	X
Stern 6,366,914	X	X	X	X	X	X	X	X	X	X
Tavor et al. 7,070,149	X	X	X	X	X	X	X	X	X	X
Bieganski et al. 6,334,127	X	X	X	X	X	X	X	X	X	X
Suzuki 6,313,745	X	X	X	X	X	X	X	X	X	X
Peyer 6,188,401		X	X			X	X	X	X	X
Burdick 6,155,928		X	X							
Anderson et al 4,319,226		X	X				X	X	X	X
Strader 6,026,440			X							

The Obviousness Rejection

It is submitted that the numerous prior art references relied upon by the Examiner, taken in combination, fail to disclose or suggest applicants' invention as claimed.

The present invention takes the form an integrated and cooperating set of application programs consisting of a storefront database server system, an advertising management engine, a recommendation engine, a content manager, and an analysis reporting module that are rapidly

integrated and deployed using pre-written installation and configuration scripts. The various components of the desired system are preferably first assembled as a pre-integrated prototype system that can be rapidly recreated on a target computer, thereby seamlessly integrating the core storefront component with the other functional units. As the pre-written scripts execute during the deployment process, the installer is prompted to provide data values which are used to modify the content of pre-written configuration template files to accommodate the special needs of each individual installation. This claimed rapid deployment methodology ensures a repeatable solution that allows businesses to quickly build and deploy e-commerce sites complete with guided buying and configuration capabilities.

In rejecting each of applicants' claims, the Examiner has relied on no fewer than seven, and as many as eleven, separate references to disclose each claim. As the Examiner has conceded, each individual reference discloses, at most, only a fragment of the claimed subject matter. None of these references discloses the problem addressed by applicants' invention (the difficulty of deploying and managing complex storefront applications consisting of multiple modules), and none discloses the claimed method which provides more rapid deployment of the claimed system.

The Examiner has made no attempt to identify any suggestion or motivation in any of the references which might lead one of ordinary skill in the art to construct the claimed subject matter from the multiplicity of fragmentary teachings cited. This rejection is plainly improper. As stated by the Court of Appeals for the Federal Circuit in *In re Denis ROUFFET et al.*, 149 F.3d 1350 at 1357, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998):

"As this court has stated, "virtually all [inventions] are combinations of old elements." *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 698, 218 U.S.P.Q. 865, 870 (Fed.Cir.1983); *see also Richdel, Inc. v. Sunspool Corp.*, 714 F.2d 1573, 1579-80, 219 U.S.P.Q. 8, 12 (Fed.Cir.1983) ("Most, if not all, inventions are combinations and mostly of old elements."). Therefore an examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat

the patentability of the claimed invention. Such an approach would be "an illogical and inappropriate process by which to determine patentability." *Sensonics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1570, 38 U.S.P.Q.2d 1551, 1554 (Fed.Cir.1996).

To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed."

In this case, the Examiner has combined not two references, but no fewer than seven, without pointing out how any of them disclose anything more than an isolated element of the claimed invention, and more importantly, without identifying any teaching or suggestion anywhere that might lead someone of ordinary skill to combine these separate teachings into the combination claimed by applicants. It is accordingly submitted that there is no basis in fact or in law for making the proposed combination of these multiple references.

As recently stated in *In re Sang-Su Lee*. 277 F.3d 1338 at 1342-43, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002):

"When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness. *See, e.g., McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed.Cir.2001) ('the central question is whether there is reason to combine [the] references,' a question of fact drawing on the *Graham* factors).

'The factual inquiry whether to combine references must be thorough and searching.' *Id.* It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. *See, e.g., Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed.Cir.2000) ('a showing of a suggestion, teaching, or motivation to combine the prior art references is an 'essential component of an

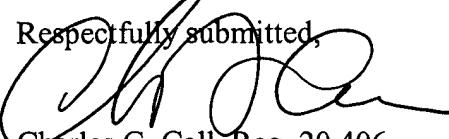
obviousness holding') (quoting *C.R. Bard, Inc., v. M3 Systems, Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed.Cir.1998)); *In re Dembicza*k, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed.Cir.1999) ('Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.'); *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed.Cir.1998) (there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by the applicant); *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed.Cir.1988) ('teachings of references can be combined *only* if there is some suggestion or incentive to do so.') (emphasis in original) (quoting *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed.Cir.1984)).

"The need for specificity pervades this authority. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed.Cir.2000) ('particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed'); *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed.Cir.1998) ("even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious."); *In re Fritch*, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed.Cir.1992) (the examiner can satisfy the burden of showing obviousness of the combination "only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references')."

Applicants' attorney has reviewed with care the cited passages in each of the eleven patents cited by the Examiner, and has nowhere found any suggestion of the problem solved by applicant's invention nor any other motivation which might have lead one of ordinary skill to combine these cited teachings to yield the claimed combinations.

It is accordingly submitted that the subject matter set forth in claims 1-10 is not obvious in view of the cited art, art, and reconsideration of the rejection for obviousness based on these references is accordingly requested.

Dated: June 25, 2003

Respectfully submitted,

Charles G. Call, Reg. 20,406

Certificate of Mailing under 37 CFR 1.8

I hereby certify that this *Amendment* is sent by U.S. Mail, First Class Postage Prepaid, in an envelope addressed to Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on June 25, 2003.

Dated: June 25, 2003

Signature 

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Specification

for

Methods and Apparatus for Implementing Internet Storefronts
to Provide Integrated Functions

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Reference to Computer Program Listing Appendix

A computer program listing appendix is stored on each of two duplicate compact disks which accompany this specification. Each disk contains computer program listings that illustrate implementations of the invention. The listings are recorded as ASCII text in an IBM PC/ MS DOS compatible file (478 kilobytes) having the filename "Appendix.txt" created June 23, 2003.

Field of the Invention

This invention relates to methods and apparatus for enabling online merchants to sell complex products and services using an integrated mechanism for personalizing sales, managing content and advertising, and generating reports.

[Reference to Appendix and]Copyright Statement

[An appendix consisting of 299 pages accompanies and forms a part of this specification and contains Unix operating system script file listings and related data that illustrate a working 15 illustrative embodiment of selected components of the invention.] A portion of the disclosure of this patent document contains material that is subject to copyright protection. The copyright owner has no objection to the facsimile reproduction by anyone of the patent document or the patent disclosure, as it appears in the Patent and Trademark Office patent file or records, but otherwise reserves all copyright rights whatsoever.

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Background of the Invention

The online sales market and its underlying technologies are quickly maturing. With the rapid market maturation, what were once competitive advantages are becoming commonplace. For example, most online consumers now expect competitive pricing, shopping carts, advance 25 search capabilities, online status checking, email notifications, and more. These trends set lofty goals for companies who must develop more compelling online experiences, determine more ways to drive sales, and enhance their competitive advantages. Whether the intent is to sell complex or custom products over the Internet, to conduct one-on-one marketing, to understand the

behavior and patterns of customers, to manage the ever-changing web store contents, or to enhance the ease of shopping, online companies must implement advanced techniques if they are to effectively compete.

The ever increasing level of competition necessitates the infusion of best practices from 5 sales and marketing with compelling product offerings. Product Managers must be able to maintain and build complex selling models without the traditional reliance on skilled programmers. Moreover, e-commerce applications need to be rapidly deployed and must be easily maintainable, even for complex [&] and custom products.

In order to create distinct competitive advantages, companies must integrate sales and 10 services. To improve customer attraction and retention, companies must develop and manage customer relationship via better sales and service integration and new technology. To insure that buyers to find what they need and place an order, the online selling process must [be] provide timely and [&] accurate enterprise data, be structured in a way that is easy to use for the buyer, allow the buyers to find what they need without undue effort and frustration, and suggest products 15 and services that are in the best interests of the customer.

Summary of the Invention

The present invention takes the form of a rapidly deployable, integrated online sales system which comprises a core storefront application that executes on a conventional web 20 database server, guided buying and sales configuration capabilities for selling complex custom products and services, content management functions, a recommendation system for predicting the preferences of individual customers and making specific real-time recommendations during a shopping session, an advertising management system, a profiling system for customizing customer interactions based on the site visitor's demonstrated interests, and a reporting system that 25 provides accurate and reliable analysis of user['] behavior to create the valuable reports.

As contemplated by the invention, the core storefront database server system, the advertising management engine, the recommendation engine, the content manager, and the analysis report generator take the form of separate modules that can be rapidly integrated and deployed using pre-written installation and configuration scripts. The various components of the 5 desired system are preferably first assembled as a pre-integrated prototype system that can be rapidly recreated, thereby seamlessly integrating the core storefront component with the other functional units. As the pre-written scripts execute during the deployment process, the installer is prompted to provide data values which are used to modify the content of pre-written configuration template files to accommodate the special needs of each individual installation. This rapid 10 deployment methodology ensures a repeatable solution that allows businesses to quickly build and deploy e-commerce sites complete with guided buying and configuration capabilities.

In accordance with another feature of the invention, a web-based user interface provides centralized system administration functions. The administration system provides password protected log-in so that only authorized persons can perform the supported administration 15 functions which include content management, content workflow, user management, product management, the creation of advertising programs, and the design and invocation of analytical reporting functions.

These and other objects, features and advantages of the present invention may be better understood through a consideration of the following detailed description in which frequent 20 reference is made to the accompanying drawings.

Brief Description of the Drawings

Fig. 1 is a block diagram illustrating the relationship between the application modules that together form the integrated online sales system contemplated by the invention, and

Fig. 2 is a flow diagram illustrating the method used to rapidly deploy the integrated application to a target installation using pre-written operating system script files.

Detailed Description

5 The preferred embodiment of the invention takes the form of a fully integrated online sales system which can be used by companies that sell simple to complex products and services and which employ personalization, content management, ad management, and report generation.

The core of the system is provided by an online storefront seen at 101 in Fig. 1 which is preferably implemented using iStore, a storefront application available from Oracle Corporation, 10 Redwood Shores, CA, which employs the Oracle 8 relational database management system and Oracle application server. In addition, the storefront 101 preferably employs Oracle's Selling Point Internet Edition to add the guided buying and sales configuration capabilities needed to sell complex products and services.

The storefront 101 is integrated with a content manager 103 such as the Vignette Story 15 Server available from Vignette Corporation, Austin, TX. The storefront [103] 101 is further integrated with a recommendation engine 105 such as NetPerceptions, available from Net Perceptions, Inc. of Eden Prairie, MN, an application which provides buying recommendations to site visitors based on a prediction of each visitor's preferences. NetPerceptions is integrated with iStore by means of a pre-written Java interface called iMarketing provided by Oracle.

20 The system further integrates advertising management functions as indicated at 107 which are preferably performed by AdManager that delivers targeted advertising and by ProfileServer, which provides customized advertising presentations based on a visitors demonstrated interests while preserving visitor anonymity. Both AdManager and ProfileServer are available from Engage, Inc. of Raleigh, NC. Finally, [Log] log files 113 that record visitor activity are passed to 25 an analysis and reporting module 109 which may be implemented by the NetAnalysis program from NetGenesis Corp. of Cambridge, MA. Each of these functional units is managed by the administration module 111. Module 111 provides a Web based menu interface to permit store employs to more easily manage the system.

The additional components integrated with the storefront applications enhance the

5 capabilities of those applications by providing implicit and explicit personalization. Implicit personalization is achieved by observing the click-stream of the user and serving up relevant content on the store pages. Explicit personalization is achieved by asking the user to explicitly rate preferences and tastes, such as hobbies, age etc. and then using these to serve up relevant content.

10 In order to rapidly deploy such a comprehensive e-commerce solution, the present invention makes use of a pre-integrated prototype that is used to deploy all of the underlying components required to seamlessly integrate the various components of the system. The storefront applications 101, the recommendation engine 105, [,] the content manager [107] 103, the advertising manager [109] 107, the analysis and reporting module 109, and the administration 15 menu system 111 are first individually loaded, configured and tested on a source computer to form an operational prototype. A like system is then be installed on one or more target machines by executing operating system script files which automatically load and initially configure the separately purchased application programs which make up the system. By combining these preferred components in a rapidly deployable prototype, an easily repeatable integrated solution is 20 provided to businesses, enabling them to quickly build e-commerce sites complete with guided buying and configuration capabilities.

Storefront 101

The core storefront 101 is preferably implemented by Oracle iStore 3.1, an application designed to enable businesses to sell non-configurable products and services over the Internet. Oracle iStore is a packaged e-commerce application that provides businesses with the necessary components to create Internet store sites for selling products and services in a secure and personalized environment. iStore supports multiple payment systems, allows the store operator to manage affiliate web links, and provides customers with coupons, discounts, and special promotions. iStore operates on the underlying technology platform of provided by the Oracle 8 relational database management system and Oracle Application Server. The iStore application can be readily integrated with back-office applications such as order entry, accounts receivable, and inventory, as well as with tax and shipping systems. Using iStore and its integrated back-office applications, customers may check inventory, place orders, and follow their orders through to delivery, all through the browser interface provided by the storefront 101.

The functionality of the storefront 101 can be further enhanced by adding the guided buying and sales configuration capabilities required to sell complex and custom products and services over the Internet. Oracle SellingPoint Internet Edition delivers these capabilities in the form of a customizable DHTML (Dynamic HyperText Markup Language) window that can be integrated into iStore. The Oracle SellingPoint adds guided buying, configuration and streamlined order submission to the core capabilities of iStore.

20 Content Manager 103

The Vignette StoryServer application may be advantageously integrated with the storefront to provide content management functions: this application provides a content management,

personalization, decision support, and enterprise integration services to efficiently create shopping experiences that attract, engage, and retain customers. The content manager 103 simplifies the tasks performed by content authors, business users, and application developers.

5 **Recommendation Engine 105**

The recommendation engine 105 is a further application that is integrated with the storefront 105 to predict an individual shopper's preferences and make specific real-time buying recommendations during a shopping session. The recommendation engine determines each individual's preferences by observing that individual's behavior. It monitors such as click-through; 10 analyzes past behavior; and obtains responses to queries, such as asking a shopper to rate a number of relevant items. Pooling this information with knowledge gained from a community of other individuals, the engine can makes buying recommendations with high predictive accuracy. The prototype system preferably employs the Oracle iMarketing application to provide 15 personalized recommendations to the users, such as displaying the best selling items in the store, displaying popular items in each store section, displaying similar items bought by other users based on the items the current user has placed in his or her shopping cart.

Advertising Manager 107

The advertising manager application which forms part of the prototype system enables the site to deliver targeted advertising. The advertising manager functions are preferably performed 20 by the AdManager and ProfileServer applications. AdManager [presents] automatically presents different advertising content in different sections of the store the user is browsing and works with ProfileServer which develops user profiles in real time so that the advertising which is presented

to the user is customized based on visitor's demonstrated interests while preserving the anonymity and privacy of the visitor.

Analysis and Reporting Module 109

5 During each shopping session, the prototype captures the user's behavior in log files indicated at [111] 113 in Fig. 1. The log files 113 are then processed by the analysis and reporting module 109 to analyze the behavior of the site visitors and to provide useful management reports that can be used to provide the insight needed to improve the site's performance. The preferred prototype system integrates the functions provided by the Net Genesis
10 NetAnalysis application to provide the desired analysis and reporting functions.

The Administration Menu System 111

The Administration Menu System 111 is a web based user interface that provides store employees with additional store management functionality to complement the basic management
15 functionality provided by iStore, and to provide a unified mechanism for managing the other applications that are integrated with the storefront 101 to form the prototype systems.

The administration menu is password protected so that only authorized users can access its functions. As used here, the term [Auser@] "user" refers to employees, supervisors and administrators for a particular store which employs the combined functionality provided by the
20 prototyped system. The user initially accesses the administration store system by entering a specific URL which then prompts the user to enter the correct user name and password. If the user name and password is valid, the user will see an "Admin Menu" screen which displays links to the following options (1) manage content, (2) manage users, or (3) manage products. This page can

serve as the home [Page] page for all administrative functions on the store. It provides links to all the third party products as well as to the iStore Store Manager page.

Content management functions allow users to create new product reviews or articles. The content can be optionally associated with a URL, an image and one or more keywords. The 5 keywords are used to classify content and personalize it to consumers based on their preferences.

After the content is entered, the user can click on a "start" button which will save the data to the database and begin a workflow process to obtain necessary approvals, etc as described below.

Content previously saved can be located by performing a search for the title or part of the title. Once located, the user can select the content specified by the title for viewing and editing.

10 When content is created or edited, it goes through a pre-defined workflow. The workflow steps are:

(1) a given content item is created, or existing content is edited.

15 (2) the content item is displayed on a store supervisor or administrator's tasklist which is divided into two portions: the top portion consists of a status list of all the content currently in the system and the bottom portion consists of a list of all content currently in workflow. The status list specifies the title of the content, its type, its status in the workflow process (ready to launch, live or expired, and potential actions that can be taken with respect to the item (launch content, change status to live or expired, etc.).

20 (3) The Store Supervisor/Administrator will click on "Edit" under the Edit column to review the content, make any necessary changes, and save the content.

(4) The Store Supervisor/Administrator will click on "Finish" under the Action column.

(5) The Store Administrator will click on "Launch" under the Action column.

(6) The Store Administrator may click on "Expire" under the Action column to remove the content from the live site. Note: Store products are not be subject to the workflow.

The [A] manage users option on the main administrative menu 5 permits the user to perform a search of a specific user. When the search results are displayed, the person managing users can the click on the user of interest to bring up the user description page. This page includes means for changing the password for the selected user.

The administrative menu system 111 provides product management tools. The 10 Find Product function in the Administration Menu uses iStore's PowerSearch functionality to allow a Store Employee/Supervisor/Administrator find a product from the iStore tables. Results will be displayed in a window below the search fields and the user can double-click a product in order to edit its information. A Retrieve/Edit/Submit Product 15 Information option reveals a screen that allows attributes of the product (retrieved from the step above) to be changed by Store Employees, Supervisors, and Administrators. The attributes that can be changed include product name, label, description, image and manufacturer.

The manage accounts option on the administrative menu permits the user to search for particular accounts. Search results will be returned in a window and the Employee / 20 Supervisor / Administrator can scroll through a list of matching accounts and double-click on the one they want to manage. Double clicking on an account opens a new window where the user will be able to enter a new password and must type the same password in a "Verify Password" field. If the passwords match it will be changed to the new password.

A link in the manage accounts screen takes the user to the AdManager application that 25 allows the user to create AdCampaigns. Based on the criteria set in these ad campaigns, the AdManager will randomly serve these ads on the Store pages.

A further link takes the user to NetAnalysis reporting that allows the user to choose the types of reports that need to be generated and run them on the Store log files.

An additional link takes the Store Administrator/ Supervisor to the iStore Manager page provided by iStore for regular store management.

5

Deploying the Prototype

As noted earlier, the rapid deployment and initialization of a complete system which combines the functionality provided by the several integrated applications is achieved through the use of operating system script files which automatically install[s] the various packaged

10 software products, as purchased from each software vendor.

Performance improvements may be made by utilizing a middle tier approach in which the database functions are handled on one server and one or more application servers are used for the various integrated applications. When this approach is used, a separate installation is performed for each application. Note that the Oracle Application Server and Vignette require the 15 presence of the Apache Web server which means these combinations must be installed and kept together on whatever server is chosen. An installation could potentially have separate application servers for iStore and Vignette.

While there are a number of files that make up the set of scripts required to clone the prototype system on the source machine, the actual number of files which must be executed by 20 the system administrator to install a new iPrototype Storefront consists only of one file: setup.sh. The setup.sh script will prompt the user for all the necessary information to complete the installation using the cloning scripts. It is assumed that user has first performed the proper pre-

installation tasks and is familiar with the process before setup.sh is executed to call the proper scripts based on the answers provided to prompts.

Part IV of the Appendix contains a full list of all the Required Setup Information prompted by the setup.sh script. A first time install can usually use the default values that have 5 been supplied. Part V of the Appendix contains an explanation of the supporting shell scripts and other files which comprise the cloning scripts and may be called by the setup.sh script, or by a script which was called by that script. It is not necessary to fully understand exactly how the cloning scripts work, but this is explained here for the interested user.

There are three main reasons for using the automated [A]cloning method of installation 10 contemplated by the present invention, rather than using the standard installation procedure for the each of the products which comprise the iPrototype Storefront: to perform the installation more rapidly, to improve consistency, and to automate the integration of the various application program which form the online sales system.

There is a significant time savings with this method as opposed to performing a standard 15 install for each product. As described above, there are several different products which comprise the iPrototype Storefront. The total installation time for all of them using conventional procedures would typically be measured in hours or more likely days when they are separately installed. In contrast, installation time for all products using the cloning approach can be measured in minutes on most machines.

20 In addition to the time saving of cloning versus a standard install for each product, the installer also saves a more substantial amount of time integrating the products. The files used in the cloning process are based on a working iPrototype Storefront. All products have already been integrated and are working together. This is a substantial time savings measured in days or

more likely even in weeks. Finally, after running the cloning scripts, the installer is assured of an integrated system that is working together properly.

To execute an installation, the user need merely perform the following steps:

1. Ensure that all files in the target system have a good backup.
2. Completed the pre installation steps and know the answers to the questions you will be asked by the cloning scripts.
3. Log in to the target machine as root.
4. Execute setup.sh.
5. Answer the questions properly for the target's specific environment

As previously mentioned, the iPrototype Storefront Cloning scripts perform a complete install by essentially copying an existing Storefront that has been fully integrated and is fully functional onto [your] the user's machine. The initial iPrototype Storefront system integrating the various components is first installed and tested at a source installation. A copy of the necessary files for cloning this source installation is contained in the tar files from the installation media. The cloning scripts themselves are written and tested in at the source installation.

The task of [Acopying@] "copying" a storefront to another machine is by no means a simple copy of source prototype's files from one machine to another. There are numerous files which contain site specific information which will not function properly in a new environment.

The task of Acloning@ must therefore not only make a copy of all files, it must then reconfigure the appropriate files to contain the proper information for the new environment.

The deployment method is illustrated in Fig. 2 of the drawings. A main script file calls a series of application specific script files as illustrated at 201. Each subscript or set of subscripts performs the installation of a particular application module and issues prompts to the installer indicating needed configuration data values and option choices as illustrated at 205 and accepts the values provided in response as indicate at 207.

This reconfiguration is achieved using a set of template files, which are reconfigured for the new environment. This set of template files consist of every file for all applications which contain any site specific configuration information. The template file is almost but not quite an exact copy of the original file from which it is based. Any site specific information has been 5 replaced with a predefined string. This predefined string can be identified and located by the cloning scripts, which will then replace this string with a new value which is the actual value specific for the new machine hosting the new storefront site. These new values are derived from questions answered by the installer when he or she runs the setup script and are posted as illustrated at 209 in Fig. 2. There are dozens of files which must be edited and reconfigured, 10 which means there are dozens of questions posed in the initial setup phase. The content of each of these template files is listed in the Appendix.

In addition to templates files, there are SQL scripts which must run to update information in the database to complete the reconfiguration. Proper execution of the iPrototype cloning scripts should result in a working storefront. The storefront and supporting server applications 15 should be working and should include the applications selected when executing the cloning scripts.

Conclusion

It is to be understood that the methods and apparatus that have been described are merely 20 illustrative applications of the principles of the present invention. Numerous modifications may be made by those skilled in the art without departing from the true spirit and scope of the invention.

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Abstract of the Disclosure

A rapidly deployable, integrated online sales system consisting of a core storefront application that executes on a conventional web database server, a guided buying and sales configuration module for selling [complex custom] products and services, a content management module, a recommendation system for [predicting the preferences of individual customers and] making specific real-time recommendations during a shopping session, an advertising management system, a profiling system for customizing customer interactions based on the site visitor's demonstrated interests, and a reporting system that provides an [accurate and reliable] analysis of user' behavior to create the valuable reports. The various components of the desired system are preferably first assembled as a pre-integrated prototype system on a source computer that can be rapidly recreated using pre-written operating system installation scripts which execute during the deployment process, prompting the installer to provide data values used to modify the content of pre-written configuration template files to accommodate the special needs of each individual installation. [A web-based user interface provides centralized system administration which include content management, content workflow, user management, product management, the creation of advertising programs, and the design and invocation of analytical reporting functions.]